

Preview 202206UECM34630E2b

Start again

1 

Marks: 1

For a zero-modified ETNB distribution, you are given: (i) $p_1 = 0.669946$, (ii) $p_2 = 0.034765$ and $p_3 = 0.004961$. Determine the probability of 0. _____

Answer:

2 

Marks: 1

Suppose S is a compound frequency distribution with primary and secondary distributions N_1 and N_2 , respectively.

N_1 and N_2 are Poisson with parameters

$\lambda_1 = 6.5$ and $\lambda_2 = 2.3$, respectively.

Find $1000P(S = 2)$. _____

Time Remaining
1:28:13

Answer:

3 

Marks: 1

Suppose the probability generating function (pgf) of the primary distribution is

$$p(z) = e^{3.0(z-1)}$$

and the pgf of the secondary distribution is

$$P(z) = [1 - \beta(z-1)]^{-1},$$

and the probability of no claims equals 0.6900000000000001. Calculate 1000β . _____

Answer:

4 

Marks: 1

Let losses occur following a frequency distribution with

- $P(N = 1) = 0.76$ and
- $P(N = 2) = 0.24$.

Suppose a deductible is imposed such that the probability of a payment resulting from a loss is now 0.79 rather than 1.

Determine the probability that the number of payments made is one times 1000.

[i.e. $1000P(N^P = 1)$]. _____

Answer:

5 

Marks: 1

The number of losses follows a Binomial distribution with $m = 36$ and $q = 0.36$. Loss sizes follow an inverse exponential distribution with $\theta = 200$. Let N be the number of losses for amount less than 400. Determine the standard deviation of N . _____

Answer:

6

Marks: 1

Let losses occur following a zero modified binomial distribution with $q = 0.84$, $m = 5$ and $p_0^M = 0.65$. Suppose a deductible is imposed such that the probability of a payment resulting from a loss is now 0.79 rather than 1. Determine the variance of the number of payments made. _____

Answer:

7

Marks: 1

Aggregate claim frequency for an employee dental coverage covering 15 individuals follows a negative binomial distribution with mean 7 and variance 14. Loss size has an exponential distribution with mean 340. The group expands to 70 individuals and a deductible of 102 is imposed. Calculate the probability of 2 or more claims from the group after these revisions times 1000. _____

Answer:

8

Marks: 1

For an insurance coverage, you are given:

- Claim frequency (N), before application of deductibles, follows a distribution with probability generating function (pgf)
 $P_N(z) = 0.35 + 0.65[1 + 0.14(z-1)]^8 / (1 - 0.86^8)$
- Claim size (X), before application of deductibles, follows a distribution with pgf
 $P_X(z) = [1 - 8(z-1)]^{0.3} \cdot 9^{0.3} / [1 - 9^{0.3}]$
- Claim frequency and claim size are independent.
- There is a deductible of 3 per loss.

Calculate the variance of the number of payments. _____

Answer:

9

Marks: 2

Click the following link to answer the questions:

https://docs.google.com/forms/d/e/1FAIpQLSfRUvV1wYI20DIcNLV8ceGzZ3KhxUIOBODMYAuqiglzVCYPA/viewform?usp=sf_link

Then answer 1 here after submitting the form.

[Note: In order to enter the google form, you must make sure that you login to UTAR account. If you see "You need permission", this means that your are not login to UTAR account, switch to UTAR account] _____

Answer:

Save without submitting

Submit all and finish

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